Appendix

Comments on Preliminary Alternatives from Resource Agencies

- U.S. Department of Interior: Fish and Wildlife Service – December 13, 2001
- Indiana Department of Natural Resources – May 6, 2002

DNR Indiana Department of Natural Resources

Frank O'Bannon, Governor
John Goss, Director

Environmental Unit
Division of Water
402 W. Washington Street, Rm. W264
Indianapolis, IN 46204-2641

6 May 2002

Cambridge Systematics, Inc
150 Cambridge Park Drive, Suite 4000
Cambridge, MA 02140

Re: DNR #9461 - SR 101 Corridor Improvement Feasibility Study; Ripley, Dearborn, Ohio, Switzerland, and Jefferson Counties

To whom it may concern:

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

The Flood Control Act (IC 14-28-1) requires the prior formal approval of the Department of Natural Resources for any proposal to construct, excavate, or fill in or on the floodway of a stream or other flowing waterbody which has a drainage area greater than one square mile. Please submit more detailed plans to the Division of Water's Technical Services Section if it appears that the project site occurs in a floodway.

The Natural Heritage Program's data have been checked. There are Nature Preserves, natural areas, and state listed species in the proposed project areas to which adverse impacts should be avoided. Both alternatives one and two appear to home in on a very sensitive area containing several natural areas, a State Nature Preserve (Lubbe Woods), and a popular outdoor recreation area located in the vicinity of where these two alternatives cross Laughery Creek. The southeastern portion of Indiana has far fewer high quality natural areas compared to other similar regions of the state. Any adverse impacts to those sites retaining high quality examples of natural communities or habitat for rare species would be shortsighted.

Attached are two maps that indicate the general locations of at least the principal areas to be avoided. Any new highway routes should avoid separating the cluster near Friendship. Impacts to forest blocks (that are considered particularly high quality or ecologically significant) should likewise be avoided. It is suggested that you contact Ron Hellmich, Division of Nature Preserves at (317) 232-8059 to obtain the Natural Heritage Program's data on the above noted Nature Preserves, natural areas, and state-listed species in the project area, and that you revisit this project after obtaining the information.

This portion of southeastern Indiana has a very high percentage of forest cover and rugged topography. This is one of the least developed areas of the state, and one of the best remaining natural landscapes in the state. In addition to large streams such as Laughery Creek, the project area contains many small headwater streams which are important to a variety of aquatic organisms, as well as many terrestrial wildlife species. At special risk are many species of amphibians which are found on the forested slopes of southeastern Indiana.

Alternatives 1-3 would involve a massive amount of forest clearing and cut/fill activities. Although precise data is unavailable at this early stage of the study, a very significant amount of fish and wildlife habitat would be impacted by a new terrain road in this area. These severe impacts would be at both the local and landscape level. In addition to direct forest losses, the impacts of forest fragmentation could be very severe in scope. Forest fragmentation is detrimental to many forest interior species of wildlife, especially some species of neotropical migratory birds. Many wildlife corridors would likely be severed, especially along forested riparian zones. The habitat associated with many streams would be degraded. Habitat for the endangered Indiana bat would likely be impacted. Because of the severe impacts to fish and wildlife resources of a new terrain road, it is recommend that alternatives 1, 2 and 3 be dropped.

Alternative 4 would have much less impact on fish and wildlife resources than the first three alternatives. We highly recommend this alternative, or look into other possible options.

Our agency appreciates this opportunity to be of service. Please do not hesitate to contact me at (317) 232-4160 or toll free at 1-877-928-3755 if we can be of further assistance.

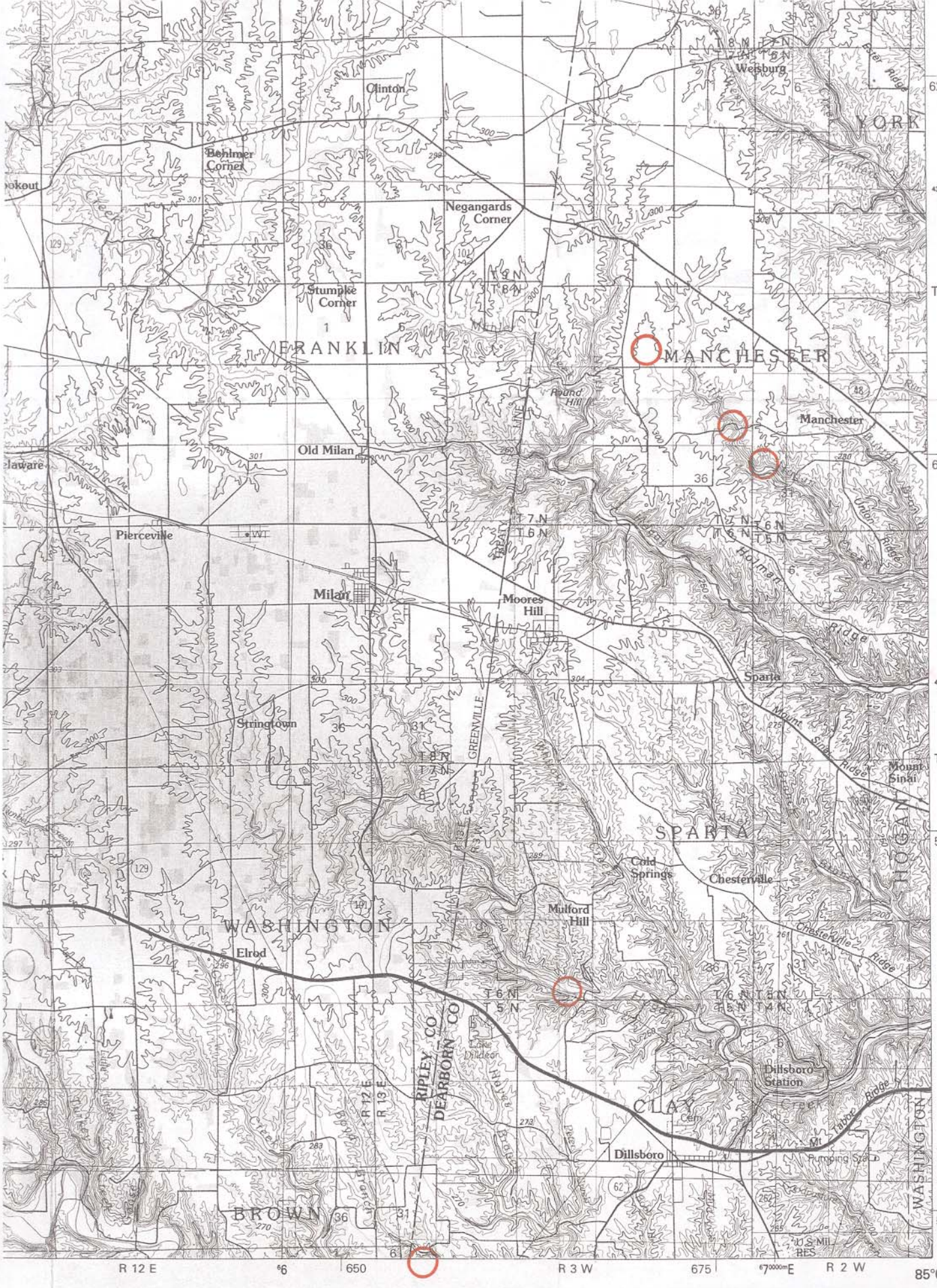
Sincerely,

Christie L. Kiefer

Christie L. Kiefer
Environmental Coordinator

Enclosures

Note: Please include the above DNR # on any future correspondence regarding this project.



GREENSBURG, INDIANA

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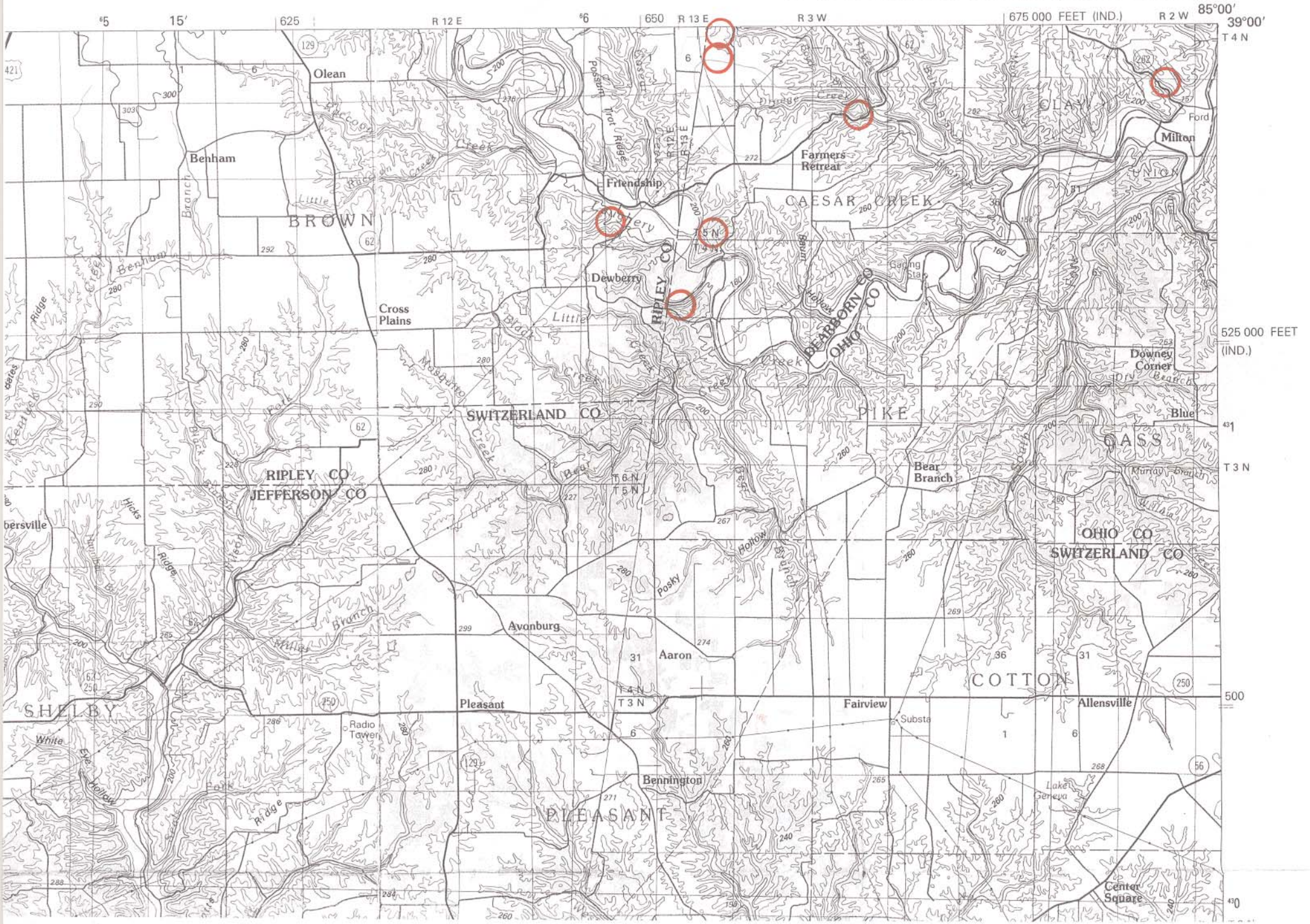
30 X 60 MINUTE SERIES (TOPOGRAPHIC)



United States Department of the Interior

FISH AND WILDLIFE SERVICE

BLOOMINGTON FIELD OFFICE (ES)
620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261 FAX (812) 334-4273

December 13, 2001

Mr. Sam Lawton
Cambridge Systematics, Inc
150 Cambridge Park Drive, Suite 400
Cambridge, Massachusetts 02140

Dear Mr. Lawton :

This responds to your memorandum dated 20 November 2001, requesting U.S. Fish and Wildlife Service (FWS) comments in response to information provided the FWS and an interagency review meeting held on 15 November 2001 concerning the SR 101 Corridor Improvement Feasibility Study.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (l6 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of l969, the Endangered Species Act of l973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

BACKGROUND AND GENERAL PROJECT AREA DESCRIPTION

The FWS will confine these comments to a general discussion of the project area outlined in the 15 November meeting and in the draft Preliminary Alternatives Report. Additional and more specific comments will be provided as the proposed project alternatives become better defined.

The Study concerns identifying possible north-south routes for a new highway through parts of Ripley, Dearborn, Ohio, Switzerland, and Jefferson Counties in extreme southeastern Indiana. The information available to the FWS at this point in the SR 101 Corridor Study consists primarily of a draft Purpose and Needs Statement and a Preliminary Alternatives Report. The purpose and need for the proposed project revolves around two issues: improving roadway safety and addressing perceptions of inadequate regional accessibility and connectivity.

As of 15 November, five corridor alternatives exist. Alternative 1 outlines a corridor between Markland Dam on SR 156 and SR 129 at U.S. 50 (3.5 miles east of Versailles) with possible upgrade of SR 129 to I-74. Alternative 2 describes a corridor between Markland Dam (S.R. 156) and S.R. 101 at U.S. 50 with possible upgrade of S.R. 101 to I-74. Alternative 3 begins at Markland Dam and intersects U.S. 50 between Dillsboro and Aurora with possible extension to I-74. Alternative 4 is not a new corridor but involves Transportation Systems Management which

entails improvements to existing roads to increase safety. Alternative 5 is no change in the existing system.

The proposed project area coincides with part of the Bluegrass Natural Region which, name notwithstanding, was historically forested (Homoya, et al). Based on a non-quantitative examination of recent satellite imagery, the area still appears to be among the most forested landscapes in the state (map 1). We used the Indiana Gap Analysis Project vegetation map (Veg12) developed primarily from 1992 Landsat satellite imagery to identify forest in the project area. Analysis of these data indicate that forest or woodland covers approximately 35% of the Bluegrass Natural Region. If one looks only at the Switzerland Hills Section of the Natural Region, where most of the impact of the proposed project would take place, forest covers approximately 47% of the area (Map 2). Considered generally, the southern part of Indiana is the most forested part of the state, and the most heavily forested part of the south is the Shawnee Hills and Highland Rim Natural Regions. Together these Natural Regions average approximately 60% forest cover. By comparison, the Southwestern Lowland Natural Region in southwest Indiana contains only approximately 23% forest. If we use existing forest as measure of intact systems in southern Indiana, the proposed project area is part of one of the best remaining natural landscapes in the state.

In addition to the broad coverage of forest, the Switzerland Hills section particularly, has rugged topography. The Indiana Heritage Database indicates numerous element occurrences in the proposed project area. These include federally listed species, state rare, threatened and endangered species, and rare or high-quality community types. Among the latter are: mesic upland forest, dry upland forest, bedrock limestone barrens, blue-grass till plains flatwoods, and others. Numerous streams harboring fishes, crayfishes, amphibians and reptiles dissect the proposed project area (Map 3). Aquatic organisms, many that depend on these headwater streams, appear to be particularly vulnerable; across the country, proportionally the most at risk groups of animals are freshwater mussels, crayfishes, amphibians, and freshwater fishes (Master, 1998).

COMMENTS AND RECOMMENDATIONS

The development of a new highway corridor (Alternatives 1-3) would affect fish and wildlife resources at both the local and landscape scales. Locally, a highway on a new alignment would degrade or eliminate habitat associated with streams, riparian corridors, and forest patches; and would have the potential to impact some comparatively rare community types within the project area. On a landscape scale, a highway and the attendant development on any of the proposed new north-south alignments (Alternatives 1-3) would further fragment the forested landscape and cut off travel corridors that currently exist along forested riparian zones. There seems little doubt that any of the new alignment proposals (Alternatives 1-3) will result in significant impacts to fish and wildlife resources.

The FWS at this early stage of project planning recommends pursuing Alternative 4 or other possible options that result in extremely limited or no construction of highway on a new alignment.

ENDANGERED SPECIES

The proposed project is within the range of the federally endangered Indiana bat *(Myotis sodalis)* and running buffalo clover (*Trifolium stoloniferum*), and federally threatened bald eagle (*Haliaeetus leucocephalus*).

Indiana bats hibernate in caves, then disperse to reproduce and forage in relatively undisturbed forested areas associated with water resources during spring and summer. Young are raised in nursery colony roosts in trees, typically near drainageways in undeveloped areas. There are current records of Indiana bats in Dearborn and Ripley counties. There is suitable summer habitat for this species present throughout the project area.

Running buffalo clover is known only from a few locations in Indiana in Dearborn and Ohio Counties.

There may be some foraging habitat for bald eagles in the project area, particularly along the Ohio River, but the project, as currently understood, would not appear likely to negatively impact this species.

This endangered species information is provided for technical assistance only, and does not fulfill the requirements of Section 7 of the Endangered Species Act.

A permit under Section 404 of the Clean Water Act may be needed for the proposed project.

We appreciate the opportunity to comment at this early stage of project planning. As project plans develop, please recoordinate with our office as soon as possible. If you have any questions about our recommendations, please call Forest Clark at (812) 334-4261 (Ext. 206).

REFERENCES

Homoya, Michael A., D.B. Abrell, J.R. Aldrich, and T. W. Post. 1985. The Natural Regions of Indiana. Indiana Academy of Science, Vol. 94

Master, Lawrence L., S.R. Flsck, and B.A. Stein, eds. 1998. Rivers of Life: Critical Watersheds for protecting Frewswater Biodiversity. The Nature Conservancy, Arlington, Virginia.

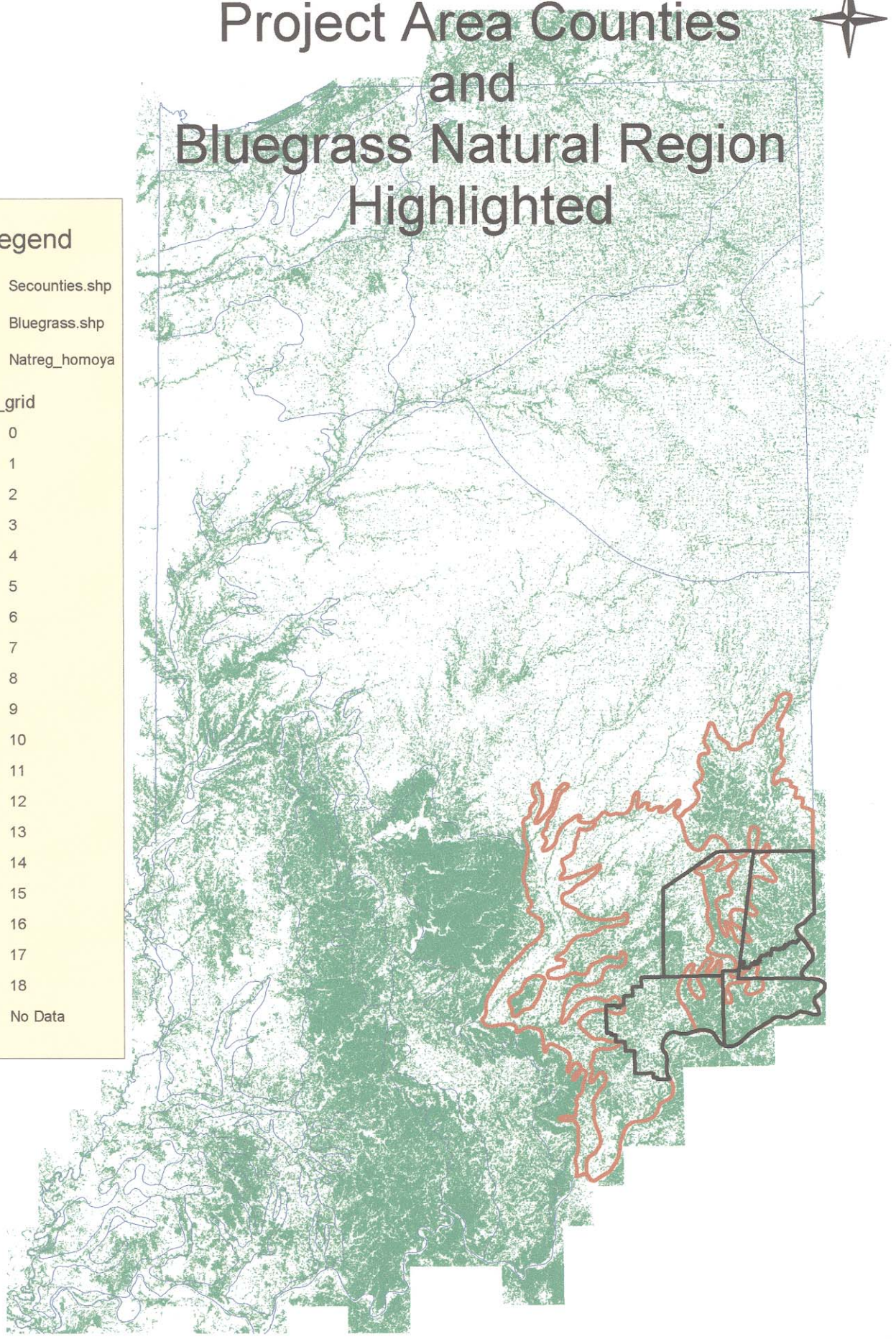
Sincerely yours,

Michael L. Pruitt

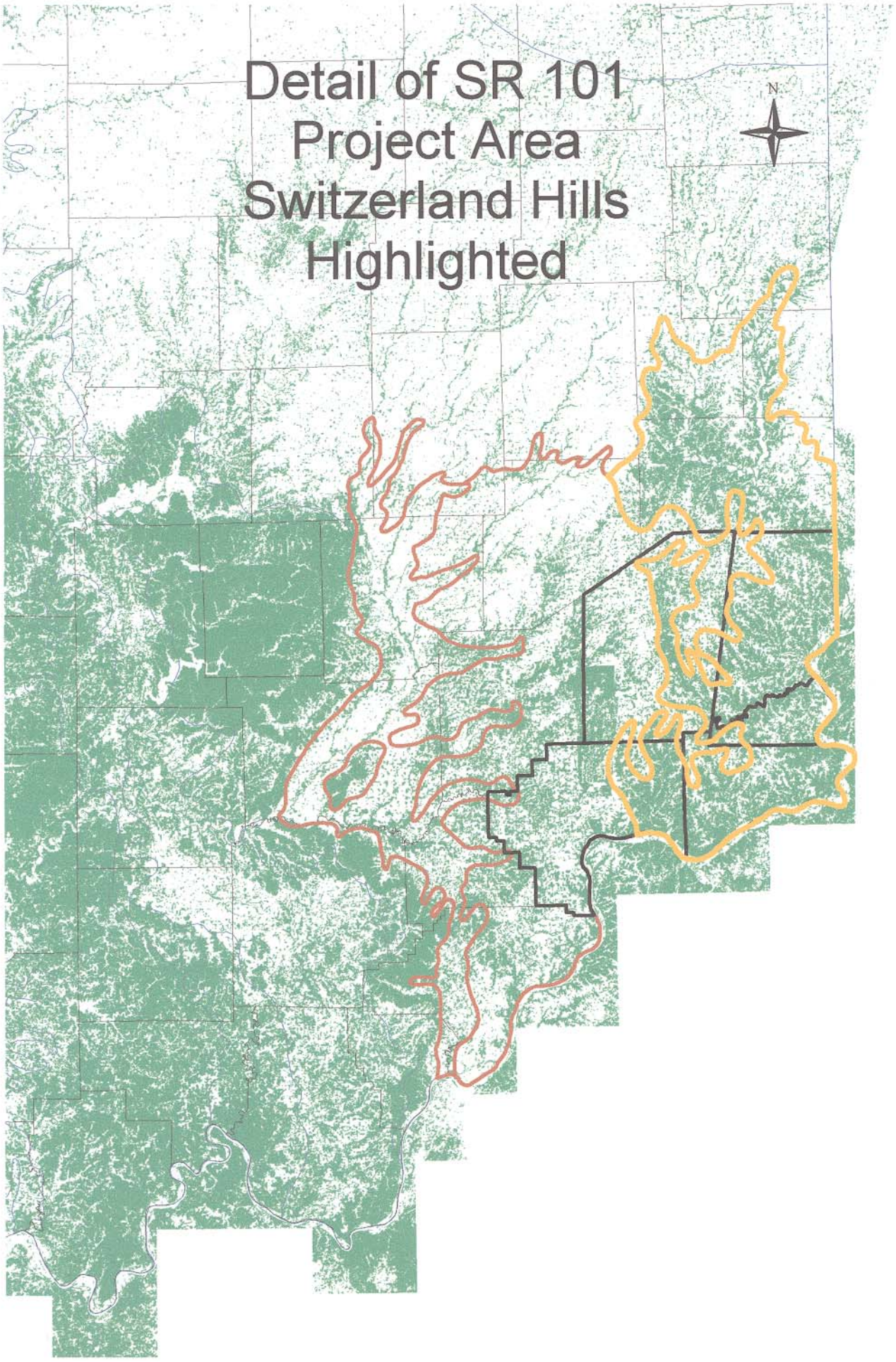
Scott Pruitt
Field Supervisor

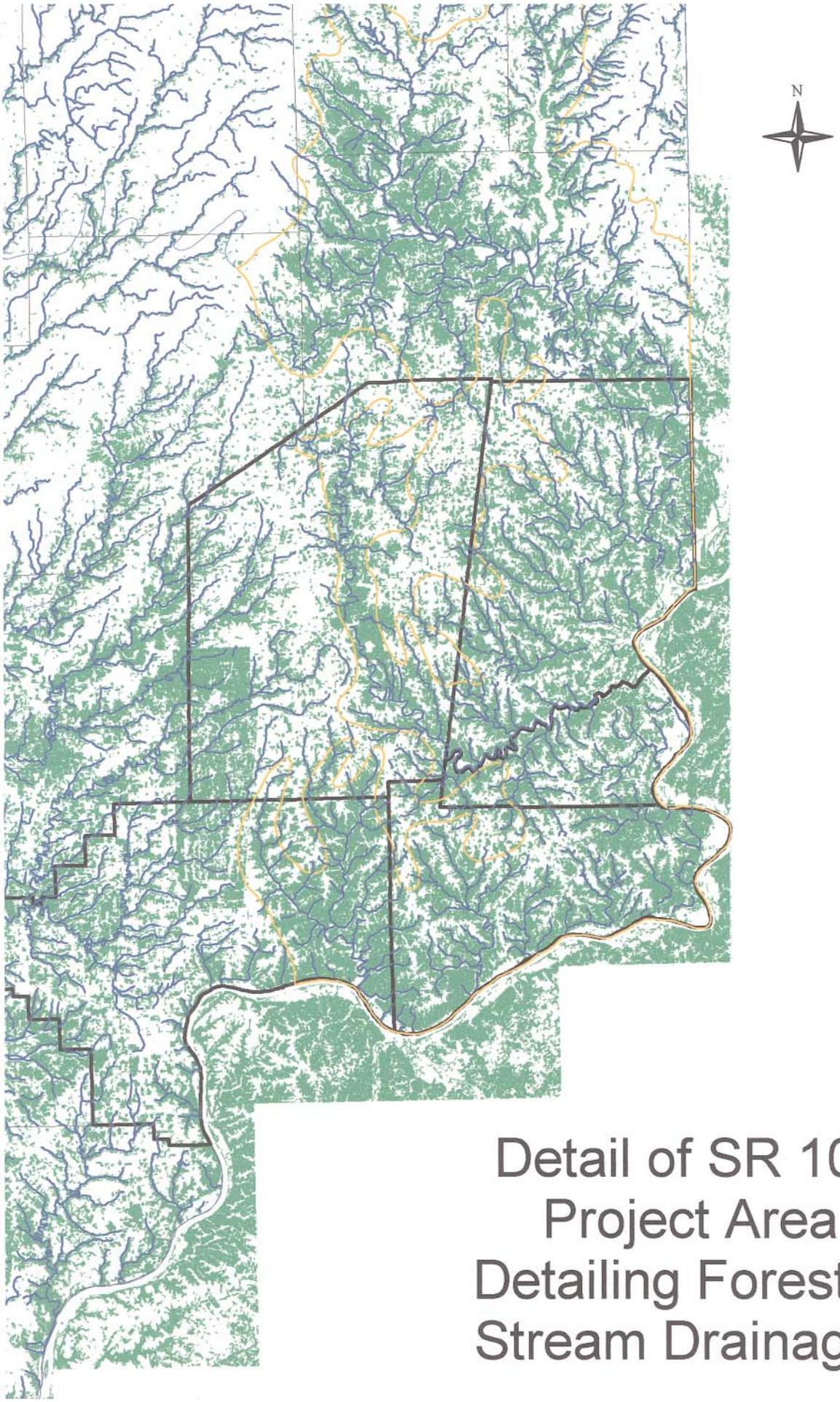
cc: Federal Highway Administration, Indianapolis, IN
IDEM, Office of Water Management (Compliance), Indianapolis, IN
Steve Jose, Indiana Division of Fish and Wildlife, Indianapolis, IN
Manager, Environmental Assessment, INDOT, Rm 1107, Indianapolis,IN
EPA, Environmental Planning, 5WFP-TUB-08, Chicago, IL

Forest of Indiana
Project Area Counties
and
Bluegrass Natural Region
Highlighted



Detail of SR 101 Project Area Switzerland Hills Highlighted





Detail of SR 101 Project Area Detailing Forested Stream Drainages